



# Data Release Production Plans

F22A (June July Aug)

Yusra AlSayyad June 8 2022



# Personnel changes for F22A

- Robert → System Commissioning Scientist
- Jim Bosch → Pipeline Scientist
- Eli Rykoff → Calibration Scientist
- Not billing Rubin at the moment:
  - Arun Kannawadi is funded by 40%-DESC and 60%-NASA grant for this cycle. Not taking reviews!
  - Josh Meyers (recall: 35%-DESC, 15%-T&S, 50%-Ops DP) currently can't bill Ops Data Production until SLAC sorts the contract out, which I expect to take rest of June
- Erfan Nourbakhsh starts July 1. Moves to Princeton June 26 (in time for the bootcamp)
  - Recently-defended grad student in Tony Tyson's group who worked on a catalog-level simulation of unresolved blending and its ultimate impact on cosmology parameters. If you're curious about what good Euclid will do us, his paper is the one to read.



# Highlights from Mar Apr May

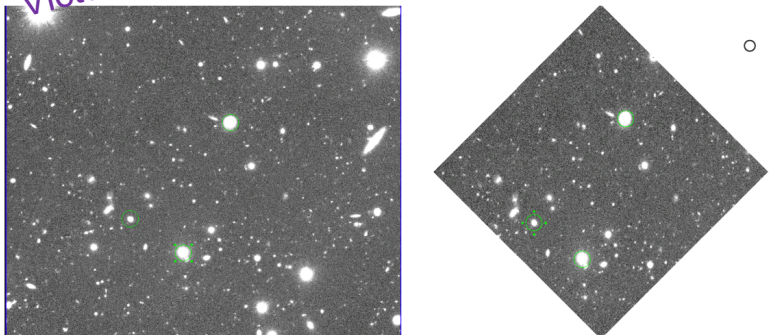
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- Held DRP metric meetings every 2-weeks to keep up with schedule of new features to flip on by default:
  - Scarlet Lite (Moolekamp)
  - Improved handling of instrumental background effects via amp-to-amp offset correction (Kelvin)
  - Use PIFF instead of PsfEx (Meyers, Kannawadi)
  - Consistent star selection for PSF-Modeling (Rykoff)
    - Task to associate source tables to find a set of **isolated bright stars** to use for image characterization **consistent for every visit**: `isolatedStarAssociation`
    - Task to redo `characterizeImage` with this consistent set of stars and reserved stars: `FinalizeCharacterizationTask`

# Highlights from Mar Apr May

- Recall from Feb:

*Victoria says, Space diamond!!*



Coadd from normal patch      warped to a HEALPix pixel

- We are expecting to generate HIPS maps for DP0.2 (as an afterburner). EPO is expecting to use them.
- Added healpix support to sphgeom with healpy. Can now coadd onto the HPX projection.
- **Next couple steps are middleware:**
  - HEALPix skymap in the butler,
  - QuantumGraph ability to write output data products in HEALPix dimensions
  - PipelineTask to warp coadds on to HEALPix skymap
  - Script to consolidate HEALPix coadds into directory/file HIPS structure
  - EPO wants color jpegs



# Highlights from Mar Apr May

- Attended LINCC workshop
- Sprint to automate those plots (*Reed*)
  - analysis\_drp pipeline gets run every RC2/DC2 and reviewed at DRP metrics meetings. Includes truth match. red galaxieis, sky background.
- Unofficial analysis\_tools working group (*incl Reed, Lust*)
- Truth-match metrics and dashboard for ImSim (*Taranu*)
- Implemented “Compensated Aperture Flux” Plugin (*Lust*)
  - Upcoming team meeting talk to review whether its something to use for photometric calibration
- Development of tools for LATISS observing:
  - RubinTV, rapid\_analysis (*Fisher-Levine*)
  - Developing workflow at the summit to ensure all calibration data passes through the verification process (*Plazas*)
- Continuing calibration verification development (cp\_verify) (*Waters*)
- Continuing moving of Gen2 tests and deletion of Gen2 code.

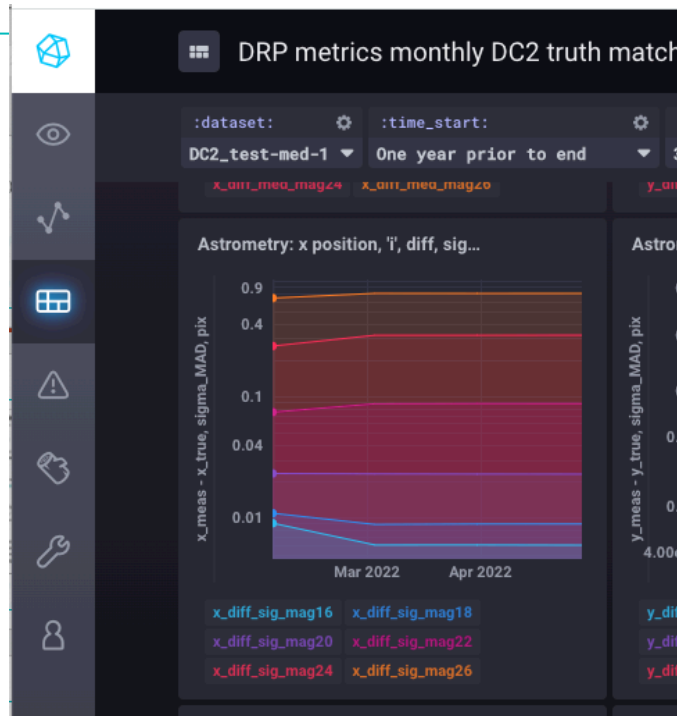




Figure: Small sliver of new Truth Match dashboard (*Taranu*)

- Projects to be started:
  - Image Characterization refactor (iteration of DMTN-172) plan coming in team meeting (Rykoff)
  - testing bright star models, amp-to-amp offset correction for lsstCam (*Kelvin*)
  - Pipeline Optimization (*Lust*)
- Events:
  - Metrics-with-the-Plots Sprint
  - [Bootcamp June 28, 29, 30](#): Intended audience is new pipelines team members, but like last time, all talks are open.
  - Jeff was our last visitor before lockdown and our third after

### DM Pipelines Bootcamp 2022

■ Data Management ■ DM Notifications

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Save the date! We are happy to announce a **2022 DM Science Pipelines Boot camp June 28-30**

**What:**

Content will be similar to ([DM Boot camp 2019](#) <sup>5</sup>), ([DM Boot Camp Announcement](#) <sup>5</sup>), with new updated material.

**Why:**

The DM Science Pipelines team has a few new team members as of this summer. The talks and docs from the last boot camp have served as valuable reference material for the DM team, and it's time for a refresh.

**Where:**

- Lectures will be remotely streamed: [Zoom](#) <sup>1</sup>
- Hands-on tutorials will be at University of Washington and Princeton University, however other institutions are welcome to locally organize as well.

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# F22A: Long-running projects

- Deblending
  - Prototype replacing noise replacer with scarlet-mode subtractor during measurement of neighbors. (*Moolekamp*)
- Fit stellar parallax and proper motion by integrating GBDES astrometric fitting code
  - In progress: Task on a branch + [RFC-853](#) (*Saunders*)
- On hold for the summer:
  - Small-cell, edge-free coadds (*Bosch, Kannawadi*)
  - PIFF In Sky Coords (*Meyers*)

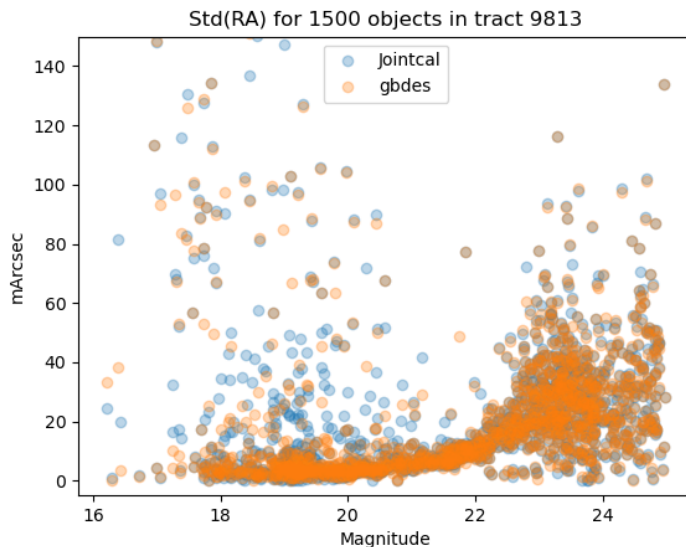


Figure credit: Clare Saunders

# DRP A&P Ops Activities

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- In S22B (Mar/Apr/May) we:
  - Supported Image Cutouts
  - Validated v23 as part of the V&V team (*Reed/MacArthur*)
  - Debugging of the delivered-PIFF.
  
- In F22A (June/July/Aug) DP A&P will:
  - Final push to get DP0.2 out the door: Documentation, notebooks, tutorials, column descriptions
  - Any support to get the USDF going: Getting repos setup, shared gen3 repos for development, calibration production.
  - Any support of CET after DP0.2 is out the door: talks at delegate assemblies, answering questions on community.



# I didn't say "Gen3" once!

